WHAT IS CLAIMED IS:

1. A method for assembling a rotor assembly for a gas turbine engine, said method comprising:

providing a plurality of rotor blades that each include a dovetail;

providing a rotor disc that includes a plurality of dovetail slots spaced circumferentially about the disc;

partially inserting each rotor blade dovetail into a respective rotor dovetail slot; and

seating the plurality of rotor blades in the respective rotor dovetail slot substantially simultaneously using an annular blade installation tool.

2. A method in accordance with Claim 1 wherein providing a plurality of rotor blades comprises providing a plurality of fan rotor blades that each include a pair of interlocking mid-span dampers that extend substantially perpendicularly from each fan rotor blade.

3. A method in accordance with Claim 1 wherein partially inserting each rotor blade dovetail into a respective rotor dovetail slot comprises:

inserting a fan blade adapter into at least one rotor dovetail slot; and

inserting the fan blade into the at least one rotor dovetail slot such that the adapter is retained in place.

4. A method in accordance with Claim 1 wherein seating the plurality of rotor blades in the respective rotor dovetail slot comprises manually seating the plurality of rotor blades in each respective rotor dovetail slot.

5. A method in accordance with Claim 4 wherein seating the plurality of rotor blades in the respective rotor dovetail slot further comprises seating

the plurality of rotor blades in the respective rotor dovetail slot using an annular blade installation tool.

6. A method in accordance with Claim 1 wherein seating the plurality of rotor blades in the respective rotor dovetail slot comprises seating the plurality of rotor blades in each respective rotor dovetail slot such that each rotor blade mid-span damper interlocks with a respective mid-span damper of an adjacent rotor blade.

7. A method in accordance with Claim 6 wherein seating the plurality of rotor blades in the respective rotor dovetail slot comprises substantially simultaneously applying a substantially equal axial force to each blade.

8. A method in accordance with Claim 7 wherein the rotor disc is supported by a rotor shaft, wherein substantially simultaneously applying a substantially equal axial force to each blade comprises:

installing a guide shaft onto a distal end of the rotor shaft;

supporting a blade installation tool from the guide shaft; and

guiding the blade installation tool such that the tool substantially simultaneously engages each blade.

9. A method in accordance with Claim 1 further comprising assembling the rotor assembly while the engine is installed on an aircraft.

10. A method in accordance with Claim 1 wherein the engine includes an airframe inlet, said method further comprises assembling the rotor assembly while the respective airframe inlet is installed on a respective aircraft.

11. A rotor blade installation tool for coupling a plurality of rotor blades to a rotor disc, said tool comprising:

a blade engagement end;

at least one brace coupled to said blade engagement end at a first end of said at least one brace; and

a guide end coupled to a second end of said at least one brace.

12. A tool in accordance with Claim 11 wherein said blade engagement end comprises a circular cross-section.

13. A tool in accordance with Claim 11 wherein each of the plurality of rotor blades extends radially between a dovetail and a mid-span damper, said blade engagement end comprises a body including a central opening extending therethrough, said body comprising an engagement face configured to contact each of the plurality of blades between the dovetails and the mid-span dampers during a blade installation process.

14. A tool in accordance with Claim 13 wherein said engagement face comprises a pad coupled to said engagement face.

15. A tool in accordance with Claim 14 wherein said plurality of blades are fabricated from a material having a first hardness number, said pad is fabricated from a material having a second hardness number, said first hardness number is greater than said second hardness number.

16. A tool in accordance with Claim 11 wherein said blade engagement end comprises a first riffled engagement side configured to conform with at least one said plurality of rotor blades.

17. A tool in accordance with Claim 11 wherein said at least one brace is configured to maintain said engagement end and said guide end in alignment during a blade installation process.

18. A tool in accordance with Claim 11 wherein said guide end comprises a body that includes a central opening therethrough, said opening is sized to receive a guide shaft therethrough.

19. A tool in accordance with Claim 18 wherein said guide end is slidingly coupled to said guide shaft.

20. A tool in accordance with Claim 11 further comprising at least one handle configured to assist a manual rotation of said tool during an installation process.